

product wherein the first layer is urethane pigment layer having a polyester adhesive layer coated thereon.

FIG. 9 depicts one method disclosed in this application, wherein an emblem can be impressed with a desired pattern and simultaneously attached on a substrate. One particular feature of the method resides in the step of simultaneously impressing the upper thermoplastic layer 14 of the emblem 24 while attaching the emblem 24 to the underlying substrate 22 using heat and pressure. To effectuate the attachment process, as depicted in FIG. 9, heat and pressure are applied using conventional sealing machines. As shown in FIG. 9, with the use of a heat-sealing device 37 having an upper platen 34 and a lower platen 36 with the ability to controllably release heat and apply pressure, a substrate 22, the emblem 24 and an impressed cover sheet 26 can be placed one on top of the other. More specifically, as shown in FIG. 9, on a lower platen 36, there is placed the desired substrate 22, followed by the emblem 24. The emblem 24 is placed on the substrate 22 in a position such that the lower adhesive layer 20, as depicted in FIG. 5, is in mating contact with the substrate 22. Furthermore, the emblem 24 is placed so that the upper thermoplastic layer 15 is exposed. Following this placement, the impressed cover sheet 26 is superimposed on the emblem 24. The impressed cover sheet 26 is superimposed such that the release coating 32 is in mating contact with the upper thermoplastic layer 14 of the emblem 24. It then follows that the base layer 30 of the cover sheet 26 is the layer that comes into contact with the upper platen 34 when the upper and lower platens 34, 36 are placed in an operative position, as shown in FIG. 10. The upper and lower platens 34, 36 are placed in an operative position for a time sufficient to bring the lower adhesive layer 20 to its melting temperature so that the adhesive can adhere to the underlying substrate 22. The upper and lower platens 34, 36 are further placed in operative position for a time sufficient to impress the upper thermoplastic layer 14 with the complement of the desired pattern 28 on the cover sheet 26. Accordingly, the upper and lower platens 34, 36 deliver heat and pressure toward the emblem and the substrate sufficient for the emblem 24 to adhere to the underlying substrate 22 and simultaneously have the cover sheet 26 impress the upper thermoplastic layer 15 of the emblem 24 with the desired pattern 22 on the surface.

In another embodiment of this invention, a method for impressing a desired pattern on an emblem without at the same time adhering the emblem to a substrate is disclosed. For this method, the emblem further requires the use of a carrier sheet to protect the lower adhesive layer 20 of the emblem both prior to, during and following the process of impressing the emblem. The carrier sheet is preferably a releasable sheet which is made of paper, fabric or plastic. If the carrier sheet is made of plastic then the plastic must have a higher melting point than the temperature required to impress the emblem. For such a method, again the impressed cover sheet 26 would be placed in mating engagement with the upper thermoplastic layer 14 of the emblem 24. Furthermore, the combination of the impressed cover sheet 26 placed together with the emblem assembly 24 would be sandwiched between the platens 34, 36 for the application of heat and pressure necessary to effectuate the impressing process on the emblem.

In yet another embodiment of this invention, a laser-cutting device or a precision knife can be used to directly

engrave or etch the fabric layer of an emblem. As depicted in FIG. 11, the Stahls' lettering pattern 12 may be etched into the fabric layer 38 of an emblem. As shown in FIG. 12, with this technique, the fabric layer 40 is itself debossed with indentations that constitute the desired pattern.

Suitable substrates 22 on which the emblem 10 can be applied include materials such as twill, cotton, wools, polyester and synthetic materials, such as Gortex and Lycra.

While the best mode for carrying out the invention has been described in detail, those familiar with the art to which this invention relates will recognize various alternative designs and embodiments for practicing the invention as defined by the following claims.

What is claimed is:

1. A cover sheet for impressing a pattern on a thermoplastic surface of an emblem, comprising:

a base layer;

a heat application release coating on the base layer;

said release coating exhibiting a heat resistant and pressure resistant debossed or embossed impression complementing the pattern; and

said cover sheet, when placed with its release coating against and in registry with the thermoplastic surface of an emblem and heat and pressure are applied on said cover sheet and toward the emblem, the pattern is formed on the thermoplastic surface of the emblem.

2. The cover sheet in claim 1 wherein said base layer is selected from the group consisting of paper, fabric and plastic.

3. The cover sheet in claim 1 wherein said coating is selected from the group consisting of silicone, vinyl and urethane.

4. The cover sheet in claim 1 wherein said coating exhibits an engraved impression formed by using a laser cutter or a precision knife.

5. The cover sheet in claim 1, wherein said coating exhibits an impression formed by stamping to boss the complementary pattern on said coating.

6. A cover sheet combination for impressing a pattern on the surface of an emblem while affixing it to a substrate, comprising:

a cover sheet having a base layer and a release coating on one face thereof;

an emblem having an upper thermoplastic layer and a lower adhesive layer;

said release coating having an impression complementing the pattern;

said emblem being positioned on the substrate in a location such that said upper thermoplastic layer is exposed;

said cover sheet being superimposed on said emblem such that said release coating is in mating engagement with said upper thermoplastic layer;

said cover sheet being heated and pressed toward the substrate and against said emblem to affix said emblem to the substrate and form the desired pattern on the emblem.

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